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James M. White

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EXAMINER

CHORBAJI, MONZER R

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/596,370
Filing Date: June 19, 2000
Appellant(s): WHITE, JAMES M.

John S. Egbert

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 05/03/2006 appealing from the Office action mailed on 08/29/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct. It is noted that on October 18, 2005, appellant faxed a proposed amendment to claims 21-35 along with a request for an interview after-final. The Proposed amendment did not include a Remark section. The examiner denied the interview since the amended claims contained new limitations that require additional search and consideration. The examiner referred the appellant to MPEP 713.09 for the conditions and scope of having interviews after-final.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,087,420	Jackson	02-1992
3,857,409	Aubrey	12-1974
6,000,418	Kern, Jr. et al.	12-1999
5,914,047	Griffiths	06-1999

Jackson discloses a biological fluid disposal system with a housing, a water flow line, a biological fluid line and a disinfectant line where all the lines have inlets positioned downwardly of the housing and the biological and the disinfectant fluids are mixed prior to passing into the water flow line.

Aubrey et al. teaches that a venturi effect is utilized to move various fluids within the device without the need to use pumps.

Kern, Jr. et al. teaches that in the art of mixing different fluids, it is known that the flow of water causes the suction and mixing of various fluids.

Griffiths teaches that in the art of decontaminating biological fluids the use of removably insertable containers is known.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 21-25, 29-31, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson (U.S.P.N. 5,087,420) in view of Aubrey et al (U.S.P.N. 3,857,409) and further in view of Kern, Jr. et al (U.S.P.N. 6,000,418).

With respect to claims 21, 29, and 33, the Jackson reference discloses a method and a device for disposal of biological fluids (col.1, lines 57-60) such that the device includes a housing (11), a water flow inlet (20) and an outlet (22), a biological fluid line (col.3, lines 33-36) such that the water fluid line and the biological fluid line are mixed together (20, 24, and 26). The Jackson reference further teaches a disinfectant line (32) in communication with the water flow line (water inside 26) such that the disinfectant line has an inlet outwardly of the housing (23). Further the disinfectant line (32 and water within 26) and the biological fluid line (24 and water within 26)) are connected with the water flow line. The Jackson reference further includes a disinfectant line (32) connected in valveless fluid communication (no valves are present on both the biological fluid line and the disinfectant line) with biological fluid line (24) at a connection point with the biological fluid line within the housing (36 and 11) between the water flow line (30) and an inlet of the biological fluid line (38 and 36) wherein the biological fluid line being substantially blood (col.1, lines 59-60). The disinfectant line and the biological fluid line are in communication within the housing (36 and 11). Furthermore, the disinfectant line (32) is in fluid communication with the water flow line (water inside 26). The Jackson reference goes on to disclose a method of disposing biological fluids (col.4, lines 51-68 and columns 5-6) including the following steps: connecting the biological fluid line in valveless relation to a disinfectant line (24 is connected to 32

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through 26) at a connection point (32), connecting a water flow line to an outlet of the biological fluid line and the disinfectant line (30 is connected to the outlets of 38 and 32), mixing the biological fluid and the disinfectant together (mixed in 26), and discharging the water and the mixed biological fluid and disinfectant from water flow line (22). The biological fluid flow in fluid line and the disinfectant flow in the disinfectant line coincide (both 24 and 32 mix together in 26 and both occupy the same place in time) together. However, the Jackson reference fails to teach that solely the flow of water causes the simultaneous (i.e., coinciding in time) suction and mixing of both the disinfectant and the biological fluid lines (venturi means) and the housing contains no pumps. The Aubrey reference housing removes any requirement of having pumps by using the venturi effect (col.4, lines 43-47, col. 7, lines 64-67 and col.8, lines 1-6), but there is no specific teaching that solely the flow of water causes the simultaneous suction and mixing (venturi effect) of both the disinfectant and the biological fluid lines. The Kern reference is further cited to show the concept that the flow of water causes the suction and mixing by venturi of different fluids (col.5, lines 17-23). For example, the flow of the diluent in channel (33) determines the suction action of the injectate in channel (39). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to remove the pump (37) of the Jackson reference and substitute the venturi effect as shown by Aubrey for fluids where the venturi effect is provided by the flow of water as shown by Kern for the known and expected result of being able to mix fluids in the absence of any pumps and to provide movement of the fluids to be mixed at less economical cost.

With respect to claim 22, the Jackson reference discloses a device having water flow inlet (20) means and outlet means (22) such that the inlet means is for passing water and the outlet means for releasing a mixture of the biological fluid and the water and the disinfectant (col.6, lines 41-45).

With respect to claim 23, the Jackson reference discloses a device that includes a water inlet (20) communicating with one end of water flow line (30a) and an outlet means (22) connected to water flow line (46) on an opposite end of water flow line such that outlet means are provided for passing a flow of liquid to a sewer (col.6, lines 46-47).

With respect to claim 24, the Jackson reference device includes a pipe (39) communicating with the water flow line (30) such that both communicate with each other through 26), the disinfectant line (32) having a connection to the pipe (connection between 32 and 26) at a distance from the water flow line (30) and between an inlet of the pipe (unlabeled inlet for 39) and water flow line (30) such that the biological fluid (38) mixing with the disinfectant (32) in pipe (39).

With respect to claim 25, the device of the Jackson reference places a valve (40) along the pipe (39) along the such that if for example the valve (40) is opened then the rate of the biological fluid is reduced since all the biological fluid is emptied from (26) to reservoir (27). However, the Jackson reference fails to place a valve between the inlet of the pipe and the connection to the disinfectant line. The device in the Kern reference includes a valve (unlabeled in figure 2 within the area A) connected to the pipe (unlabeled part of 26 between the valve and 22 within the area A) between the inlet of the pipe (unlabeled connection between the valve and the pipe in figure 2 within the

area A) and connection to the injection tube 21. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to place the valve between inlet of the pipe and connection to the disinfectant in the Jackson apparatus since such a modification is a matter of choice of design of the artisan evidenced by the Kern reference.

With respect to claim 31, the Jackson reference teaches that the treated fluid is interconnected to a sewer (22 and col.6, lines 45-47).

With respect to claim 34, the Jackson reference discloses a method that includes connecting the disinfectant line (32) to the biological fluid line (24 through 26) between an inlet of the biological fluid line (36) and the outlet of the disinfectant line (outlet of 32).

With respect to claim 30, both the Jackson reference and the Aubrey reference fail to teach the use of venturi means; however, the Kern reference discloses the concept of venturi means such that solely a water flow across openings of various different fluids creates a suction force (col.5, lines 17-23). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to remove the pump (37) of the Jackson reference and substitute the venturi effect as shown by Aubrey for mixing fluids where the venturi effect is provided by the flow of water as shown by Kern for the known and expected result of being able to mix fluids in the absence of any pumps and to provide movement of the fluids to be mixed at less economic cost.

Claims 26-28, 32, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson (U.S.P.N. 5,087,420) in view of Aubrey et al (U.S.P.N.

3,857,409) and Kern, Jr. et al (U.S.P.N. 6,000,418) as applied to claims 21, 29 and 33 above and further in view of Griffiths (U.S.P.N. 5,914,047).

The Jackson reference discloses a pipe (39) in valveless communication with the biological fluid line (38) at a connection point (unlabeled connection between 26 and 39) within the housing (11); however, with respect to claims 26-28, 32 and 35, the Jackson, the Aubrey and the Kern references all fail to disclose containers for biological and disinfectant fluids such that the fluid lines are inserted into the containers, however; the Griffiths reference discloses the following: a suction line for insertion into a biological fluid container (70A), a biological fluid container (46A) having a top level (68), inserting an inlet of the biological fluid line into a container of biological fluid (col.7, lines 33-35), a disinfectant container (80) having a top level (82), and a suction line for insertion into a disinfectant fluid container (84). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and the device of the Jackson reference to include a biological fluid container and disinfectant container as taught by the Griffiths reference since it functions as a container for untreated liquid waste (col.7, lines 31-32).

(10) Response to Argument

Claims 21-25, 29-31, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson (U.S.P.N. 5,087,420) in view of Aubrey et al (U.S.P.N. 3,857,409) and further in view of Kern, Jr. et al (U.S.P.N. 6,000,418).

A.1 On pages 8-9 of the brief, Appellant argues that, "The disinfectant line element of the present invention, with corresponding limitations on the disinfectant line element as

claimed, is not disclosed by the prior art combination.” Appellant further argues that Jackson depends on pumps and valves for active control of the liquids throughout the system, that Aubrey does not teach a pumpless and valveless structure and teaches against such because of needed electronic controls, that Kern does not teach the flow of disinfectant fluid depended on the flow of biological fluid, no inter-relationship two fluids with related venturi effects are not disclosed in Kern, that there is no suggestion of using more than one venturi with the structural limitations, and that the coinciding flow of disinfectant and biological fluid flow is not taught by Kern.

As to Appellant’s arguments in reference to Jackson, the apparatus in Jackson as discussed above requires no valves on either the biological fluid line or the disinfectant line. As set forth above, the embodiment relied upon in Jackson is that as shown in Figure 6 where the disinfectant line is 32, the biological fluid input line is through aspirator line 24 (figure 6, column 3, lines 30-36), and the water flow line is 26 (figure 6). The disinfectant line (32) is in valveless fluid communication at a connector point with the biological fluid line within the housing. (see Figure 6:36 and Figure 1:11). As to the limitation that the housing has no pumps, such is met in combination with the Aubrey and Kern references as set forth above.

As to Appellant’s arguments in regards to Aubrey, the embodiment relied upon in the rejection does not require the use of pumps an the valveless limitation is met by the reference Jackson as set forth above. Aubrey is cited to show an example in the art that demonstrates it is known to use a venturi effect as an economical equivalent alternative in the art to pumps in order to transfer fluids. The mixing device (figure 1:10) of the

Aubrey reference transfers various fluids through venturi means and does not use pumps (col.2, lines 33-35). However, in one embodiment pumps are part of the apparatus (X-ray processor in col.2, lines 12-15) itself when combined with the Aubrey's device and not within the device itself. In another embodiment (col.8, lines 4-6) of the Aubrey reference, the use of replenisher pump is not required. With respect to a valveless structure within the housing, figure 1 of the instant application uses valves (42, 62 and 54) that are within the housing (12). This feature has been addressed above in the Jackson reference.

As to Appellant's arguments with respect to Kern, the rejection is based on the fact that it is known in the art to use a venturi effect as an alternative to pumps in liquid transfer as shown by Aubrey and further that it is known to provide a venturi effect for the mixing and suction or drawing of fluids through the use of a water flow line as exemplified by Kern. As discussed above, the Jackson reference teaches that the biological flow in the biological fluid line and the disinfectant flow in the disinfectant line coincide (in figure 6, both 24 and 32 mix together in 26 and both occupy the same place in time) together. However, the Jackson reference fails to teach that solely the flow of water causes the simultaneous (i.e., coinciding in time) suction and mixing of both the disinfectant and the biological fluid lines (venturi means). The Kern reference is cited to show the known concept that the flow of water causes suction and mixing of different fluids by venturi effect (col.5, lines 17-23). For example, the flow of the diluent in channel (33) determines the suction action of the injectate in channel (39). The combination of Jackson, Aubrey and Kern results in replacing the pump (figure 6:37)

with the venturi structure. This replacement results in creating suction of the biological fluid and the disinfectant fluid in the Jackson system due to the flow of water such that whether the rate of flow of the disinfectant fluid depends on the rate of flow of the biological fluid or vice versa, such interrelationships are intrinsic to the combination of the Jackson and the Kern references. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to delete the pump (37) of the Jackson reference and substitute the venturi effect of Aubrey with the use of a water flow line as shown by Kern for mixing for the known and expected result of being able to mix fluids in the absence of any pumps and to provide the movement of the fluids to be mixed at less economical cost.

As to Appellant's argument that there is no suggestion of this use of more than one venturi with the structural limitations included in the claim language, the instant claims do not recite the use of more than one venturi structure.

A.2. Appellant argues on page 9 that the inlet channel 32 in Jackson is only for mixing the biological fluid line and the water flow line, that Jackson discloses a single channel instead of two channels, that there is no disclosure in Jackson of the biological fluid line and the disinfectant line of the present invention as separate lines, and that the mixture of the disinfectant and biological fluid occurs outside of the housing. Appellant further argues on pages 10 and 11 that the Aubrey patent does not disclose a pumpless system, that the Aubrey device relies on pump action to mix fluid, and that the references do not disclose or make obvious the specific venturi effect produced by the invention and claimed.

As to Appellant's arguments in reference to Jackson, the separate biological fluid and disinfectant lines are clearly disclosed by Jackson as set forth above. Jackson clearly discloses an embodiment where the biological fluid is alternatively provided through aspirator line 24 coupled to inlet 21 (column 3, lines 33-36) and the disinfectant is provided through waste inlet 23 (column 5, lines 50-60) and passes through channel 32 (therefore channel 32 meets the limitations of a separate disinfecting line; see figures 1 and 6). The mixture of the disinfectant and the biological fluid in this embodiment does not occur outside of the housing since the two materials enter the housing through two separate inlets (23 and 21 respectively).

As to Appellant's arguments in regard to Aubrey, as set forth, Aubrey is cited to show it is known to provide a venturi effect as an alternative to a pump when transferring fluids. One of ordinary skill in the art providing the device in Jackson would be motivated to provide a venturi effect as an alternative to a pump in order to reduce costs as shown by Aubrey and one of ordinary skill in the art would readily recognize providing the venturi effect through the use of the water flow line as is also known in the art and exemplified by Kerns. Only the expected results would be attained.

A.3. On page 11 of the brief, Appellant argues in regards to claim 24 that, "it is most likely beyond reasonable interpretation to characterize the macerator 26 element of the Jackson patent as both the disinfectant line 32 and a water line 30".

Examiner has clearly discussed the limitations of claim 24 on page 6 of the Action dated 12/16/2004, by statutory the reference Jackson discloses a pipe (39), a water flow line (30), a disinfectant line (32) having a connection point to the pipe

between (32 and 26) at a distance from the water flow line (30) and the biological fluid in line (38) is mixed with disinfectant in disinfectant line (32) in pipe (39). The macerator (26) is recited as a point of communication, for example, between the pipe (39) and the water flow line (30) and not as both the disinfectant line and the water line as argued by Appellants.

Claims 26-28, 32, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson (U.S.P.N. 5,087,420) in view of Aubrey et al (U.S.P.N. 3,857,409) and Kern, Jr. et al (U.S.P.N. 6,000,418) as applied to claims 21, 29 and 33 above and further in view of Griffiths (U.S.P.N. 5,914,047).

On page 12 of the brief, Appellant argues that these limitations on the container connections are not disclosed or suggested by the combination with the Griffiths patent because the Griffiths patent teaches pumps 108 to create the flow of disinfectant and that the Griffins patent teaches against the limited pumpless of the Aubrey patent in combination.

As set forth previously, the limitations of claim 27 are met by disclosures of Jackson, Aubrey, Kern and Griffith, Jackson discloses a pipe (39) in valveless communication with the biological fluid line (38) at a connection point (unlabeled connection between 26 and 39) within the housing (11). The Griffiths reference is cited to show a suction line for insertion into a biological fluid container (70A), a biological fluid container (46A) having a top level (68), inserting an inlet of the biological fluid line into a container of biological fluid (clo.7, lines 33-35), a disinfectant container (80) having a top level (82), and a suction line for insertion into a disinfectant fluid container

(84). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and the device of the Jackson reference to include a biological fluid container as taught by the Griffiths reference in order to provide a container for untreated liquid waste (col.7, lines 31-32). The Griffiths reference is not relied upon for the other structural parts of the device.

Clearly, as shown above, the Griffiths reference is combined with the references for having containers where the fluid lines are insertable into the containers. Whether the Griffiths system includes pumps or not is irrelevant to this combination.

Appellant's additional Arguments

A. On page 14 of the brief, Appellant argues that, "These combinations are from entirely different applications in the field of art, such that one skilled in the art of fluid processing would not combine these references."

All the patents applied are all from the same art, which is mixing fluids. The Jackson and the Griffiths references decontaminate biological fluids by mixing them with disinfectants. The Aubrey and the Kern reference mix fluids by the use of venturi elements.

A.1. On page 14 of the brief, Appellant argues that the Jackson patent is quite distinguishable from the present invention in that the Jackson patent is a timed batch process, and then discloses the Aubrey and Kern references.

The instant claims do not recite either a batch or a continuous process. These arguments are not directed any claim limitations.

A.2. On pages 14-15 of the brief, Appellant argues that the Jackson patent and the Aubrey patent both teach against the passive control by venturi effect in the Kern patent.

As set forth above, one of ordinary skill in the art at the time of the invention providing the system in Jackson would be motivated to provide a venturi effect as a more economical alternative to a pump as exemplified by Aubrey and further to use the water flow line as exemplified by Kern in order to provide mixing and drawing of fluids in a venturi effect. The references Aubrey and Kern are merely cited as examples of known concepts in the general fluid handling arts. It is further noted, the Aubrey reference uses the venturi effect to mix various different fluids (col.2, lines 34-38, col.4, lines 40-47 and col.5, lines 14-59). In addition, the Aubrey reference housing includes no pumps by using the venturi effect (col.4, lines 43-47, col. 7, lines 64-67 and col.8, lines 1-6), but there is no teaching that solely the flow of water causes the simultaneous suction and mixing (venturi effect) of both the disinfectant and the biological fluid lines. The Kern reference discloses the concept that the flow of water causes the suction and mixing by venturi of different fluids (col.5, lines 17-23). For example, the flow of the diluent in channel (33) determines the suction action of the injectate in channel (39). Clearly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to remove the pump (37) of the Jackson reference and substitute the venturi effect as shown by Aubrey for mixing fluids where the venturi effect is provided by the flow of water as shown by Kern for the known and expected result of

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being able to mix fluids in the absence of any pumps and to provide movement of the fluids to be mixed at less economical cost.


B. Appellant's arguments in reference to Griffiths have all been addressed above.



(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Monzer R. Chorbaji 
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05/23/2006

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